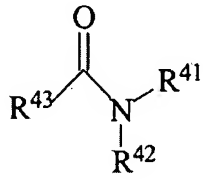
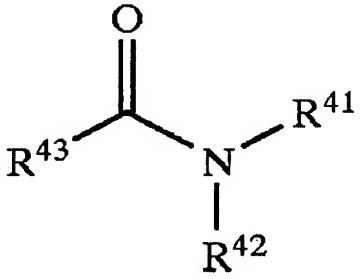
REMARKS

Claims 1-5, 10-16 and 19-27 are pending. Claims 6-9 and 17-18 have been canceled without prejudice.

I. Amendment Support

Applicants respectfully submit that there is support in the specification for the amendment to claim 1. Support for the amendment to claim 1 is shown in the following table.

Claim 1 (in part) As Amended Herein	Support In PG Pub 2004/0038163
A photothermographic material comprising... at least one compound having a hydrogen bond formation rate constant K_f that is 20-4000,	[0008] That is, the present invention provides a photothermographic material comprising, ... **one or more compounds satisfying at least one of the following requirements A** and B in combination: [0009] **A: the hydrogen bond formation rate constant Kf is 20-4000,**
which is represented by the following formula (IV):  (IV)	[0010] B: the chemical structure is represented by the following formula ... (IV) ... 
wherein: and in the formula (IV), R^{41} and R^{42} independently represent an alkyl group, an aryl group or a heterocyclic group, R^{43} represents an alkyl group, an aryl group, a heterocyclic group or N-(R^{44})(R^{45}) where R^{44} and R^{45} independently represent an alkyl group, an aryl group or a heterocyclic group, and	[0013] In the formula (IV), R^{41} and R^{42} independently represent an alkyl group, an aryl group or a heterocyclic group. R^{43} represents an alkyl group, an aryl group, a heterocyclic group or -N(R^{44})(R^{45}). R^{44} and R^{45} independently represent an alkyl group, an aryl group or a heterocyclic group. ...
the formula (IV) further includes the	[0013] In the formula (IV), ... R^{43}

following (1), (2) and (3): (1) R^{41} and R^{42} are taken together to form a ring where R^{41} and R^{42} taken together are atoms necessary to form the ring, and R^{43} represents an alkyl group, an aryl group a heterocyclic group or $-N(R^{44})(R^{45})$ where R^{44} and R^{45} independently represent an alkyl group, an aryl group or a heterocyclic group;	represents an alkyl group, an aryl group, a heterocyclic group or $-N(R^{44})(R^{45})$. R^{44} and R^{45} independently represent an alkyl group, an aryl group or a heterocyclic group. Two ... of R^{41} [and] R^{42}... may be taken together to form a ring.
(2) R^{43} represents $-N(R^{44})(R^{45})$, R^{41} and R^{44} are taken together to form a ring where R^{41} and R^{44} taken together are atoms necessary to form the ring, and R^{42} and R^{45} independently represent an alkyl group, an aryl group or a heterocyclic group;	[0013] In the formula (IV), ... R^{42} independently represent an alkyl group, an aryl group or a heterocyclic group. R^{43} represents an ... $-N(R^{44})(R^{45})$. ... R^{45} independently represent an alkyl group, an aryl group or a heterocyclic group. Two ... of R^{41}... [and] R^{44} ... may be taken together to form a ring.
(3) R^{43} represents $-N(R^{44})(R^{45})$, R^{44} and R^{45} are taken together to form a ring where R^{44} and R^{45} taken together are atoms necessary to form the ring, and R^{41} and R^{42} independently represent an alkyl group, an aryl group or a heterocyclic group	[0013] In the formula (IV), R^{41} and R^{42} independently represent an alkyl group, an aryl group or a heterocyclic group. R^{43} represents ... $-N(R^{44})(R^{45})$. ... Two ... of ... R^{44} and R^{45} may be taken together to form a ring.

It is further noted that there is additional support at paragraph [0053] and in the examples for the above-amendment to claim 1.

Support for new claims 22-24 can be found in [0068] of the publication. Support for new claims 25 and 26 can be found in [0070] and [0072] of the publication. Support for the amendment to claim 12 and new claim 27 can be found in [0070], [0072] and [0307] of the publication.

As such, no new matter has been added by way of the above-amendment.

II. Interview

Applicants note with appreciation that the Examiner conducted an Interview with Applicants' representative on December 4, 2007 to discuss the above-amendment. The Examiner was helpful in relaying his opinion on matters.

It is noted that the above-amendment is identical to the proposed amendment discussed during the Interview.

III. Issues Under 35 U.S.C. § 112, First and Second Paragraphs

Claims 1-5, 10 and 11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. Also, claims 1-5, 10 and 11 stand rejected under 35 U.S.C. § 112, first paragraph, as lacking written description support in the specification. **Applicants respectfully traverse** the rejections.

The Examiner continues to object to Applicants' definition of the variable groups R^{41}, R^{42}, R^{44} and R^{45} in claim 1. The Examiner states that "an alkyl group, an aryl group or a heterocyclic group [is] recited as substituent for R^{41} and R^{42}, R^{44} and R^{45} in three occurrences, and appears to be awkward and unnecessary." In response, Applicants have removed the redundant language.

The Examiner finds that Compound (8) on page 19 and Compound (17) on page 20 of the specification are not encompassed by the claims. As noted during the Interview, these compounds are encompassed by the claims. And even assuming *arguendo* that these compounds are not encompassed by the claims, there is no requirement in 35 USC 112 that all embodiments are encompassed by the claims.

Lastly, as noted in Section I above, there is full written description support for amended claim 1.

Based on the foregoing, Applicants respectfully submit that claims 1-5, 10 and 11 particularly point out and distinctly claim the subject matter which Applicants regard as their invention, and claims 1-5, 10 and 11 have written description support in the specification. As such, there are no remaining issues under 35 USC 112, and withdrawal of the rejections is respectfully requested.

IV. Issues Under 35 U.S.C. §§ 102(e)/103(a), Anticipation/Obviousness

The following Rejections are pending:

(A) Claims 1-5, 10 and 11 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious in light of Miura et al., U.S. Patent No. 6,248,512 (hereinafter, "Miura et al."); and

(B) Claims 12-16 and 19-21 stand rejected under 35 U.S.C. § 103(a) as being obvious in light of Bojora et al., U.S. Patent No. 3,667,959 (hereinafter, "Bojora et al."), in light of Miura et al.

Applicants respectfully traverse Rejection (A) and Rejection (B).

IV - A. Miura et al.

In order to further distinguish the present invention from the teachings of Miura et al., Applicants have amended claim 1 to further define the compounds of Formula (IV). It is noted that each one of the compounds cited by the Examiner in Miura et al. has a N-Br and/or Br-Br bond. In view of the fact that the compounds of amended claim 1 do not have a N-Br and/or Br-Br bond, a *prima facie* case of obviousness cannot be said to exist.

We now turn to the Examiner's comments.

The Examiner states that although there are differences in the structures of the Miura et al., the scope of the subject matter encompassed by the claimed compounds according to claim 1 encompass formulas A-29 and A-36 of Miura et al.

The above amendment of Claim 1 clearly obviates Compounds A-29 and A-36 of Miura et al. The compounds B-1 to B-3, B-5 and B-9 to B-12 do not have the claimed Kf[1] as is explained in the Mikoshiba Declaration (submitted with the 7/6/07 Amendment, a copy of which is attached hereto for the Examiner's convenience).

Furthermore, the Examiner's attention is respectfully directed to D. Gurka and R.W. Taft, (Journal of the American Chemical Society 91:17, a copy of which is attached hereto). Table III shows that tetrahydrofuran, 2-butanone, ethyl acetate and diethyl ether have a Kf of less than 20. This fact indicates that the lower limit of the claimed range (Kf= 20) is sufficiently high and the claimed range is not unreasonably broad. A person skilled in the art would readily recognize that Kf of the compounds B-1 to B-3, B-5 and B-9 to B-12 of Miura et at. are lower than Kf of tetrahydrofuran, 2-butanone, ethyl acetate and diethyl ether. The compounds B-1 to B-3, B-5 and B-9 to B-12 have two amide groups, and have both an H-Br and a Br-Br bond in the molecule (see columns 15 and 16). The carbonyl group of one amide group forms a hydrogen bond with H-Br and the carbonyl group of the other amide group forms a hydrogen bond with Br-Br (accurately H^+ - Br^- and Br^+ - Br^- are coordinated to the amide groups). Thus, the compounds B-1 to B-3, B-5 and B-9 to B-12 are prevented from forming additional hydrogen bonds with other compounds due to the intramolecular hydrogen bonds. Tetrahydrofuran, 2-butanone, ethyl acetate and diethyl ether are not prevented from forming a hydrogen bond because they do not have an intramolecular hydrogen bond. It is therefore very obvious that the compounds B-1 to B-3, B-5 and B-9 to B-12 have a Kf of less than 20. A person skilled in the art would readily appreciate it.

Based on the foregoing, significant patentable distinctions exist between the present invention and the teachings of Miura et al. As such, withdrawal of Rejection (A) is respectfully

[1] In this regard, the Examiner mentions in line 5 from the bottom on page 7 of the official action that the claimed Kf range of 2 to 4000. This appears to be a typographical error. The claimed Kf range is 20 to 4000.

requested.

IV - B. Bojora et al combined with Miura et al

In response to this rejection, Applicants have amended claim 12 to add the phrase "the compound represented by the formula (III) or the reducing agent for the silver ions having been added in the form of solid microparticle dispersion to form the photothermographic material". Support for the phrase can be found in [0070], [0072] and [0307] of the publication.

It is respectfully submitted that none of Miura and Bojora describe or suggest that the compound represented by the formula (III) or the reducing agent for silver ions is added in the form of solid microparticle dispersion to form the photothermographic material. As the MPEP directs, all the claim limitations must be taught or suggested by the prior art to establish a *prima facie* case of obviousness. See MPEP § 2143.03. In view of the fact that none of Miura and Bojora describe or suggest that the compound represented by the formula (III) or the reducing agent for silver ions is added in the form of solid microparticle dispersion to form the photothermographic material, a *prima facie* case of obviousness cannot be said to exist and withdrawal of Rejection (B) is respectfully requested.

Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq., Reg. No. 43,575 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: December 13, 2007

Respectfully submitted,

By Gary M. Weiner #43575
Marc S. Weiner For
Registration No.: 32,181
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant

Attachments:

(1) The MIKOSHIBA Declaration (8 pages)
(2) D. Gurka and R.W. Taft, Journal of the American Chemical Society 91:17 (1 page)